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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,438	01/27/2004	Kenji Shiraishi	248078US2	8684
22850 7590 09/20/2007 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER PETERSON, CHRISTOPHER K	
			ART UNIT 2622	PAPER NUMBER
			NOTIFICATION DATE 09/20/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

Application No.

10/764,438

Applicant(s)

SHIRAISHI ET AL.

Examiner

Christopher K. Peterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 8/23/2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 3, 7, 11, 14-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-6, 8-10, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 3/24/2004, 4/27/2004, and 3/18/2005 is in compliance with the provisions of 37 CFR 1.97 and has been considered by the Examiner.

### ***Election/Restrictions***

3. Claims 3, 7, 11, and 14 - 25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on August 23, 2007.

The Applicant is reminded that upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

***Specification***

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

As stated above the abstract should be in narrative form and generally limited to a single paragraph. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. Examiner believes the abstract is a summary of claim 1 not a summary of the invention.

***Drawings***

6. The drawings are objected to under 37 CFR 1.83(a) because they fail to show descriptions (Fig. 2) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claim 9 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 9 defines a control program embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed control program can range from paper on which the program is written, to a program simply

contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim 13 defines a "recording medium which is readable by the computer recorded the control program described in claim 9". Examiner suggests rewriting and combining claims 9 and 13 with the proper terminology from above.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1, the claim recites "wherein said timing part measures an elapsed time from the exposure period timing signal right before a beginning of an exposure setup operation to the beginning of the exposure setup operation by said exposure period setup part, and when a time from the beginning of the exposure setup operation calculated by the measured elapsed time to a generation of a next exposure period timing signal is equal or greater than a predetermined time, said imaging apparatus control part shortens the time till the generation of the next exposure period timing signal from a regular exposure period".

9. Claim 1 recites the limitation " said image pick up device control part " on page 27, line 11 and 12. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 1 recites the limitation " said exposure period setup part " on page 27, line 12 and 15 - 16. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1, 2, 4 - 6, 8 - 10, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyake (US Patent # 5,767,904).

As to claim1, Miyake (Fig. 1) teaches an imaging apparatus comprising:

- a setup part (clock generator 24) for an exposure period for generating a timing signal (VD signal) which prescribes an exposure period of an image pick up device (CCD 11) (Col. 10, lines 11 – 17);
- a control part (CCD control) for the image pickup device (11) for controlling an operation of said image pick up device (11) in



synchronization with said timing signal (VD signal) of the exposure period (Col. 8, lines 19 – 35);

- a timing part (data set time  $\alpha$ ) for measuring an elapsed time from the timing signal of the exposure period (Col. 7, lines 58 – 62);
- an imaging apparatus control part (CPU 23, 31, and 37 and CCD control) for controlling said image pick up device part (CCD control) and said exposure period setup part (clock generator 24) (Col. 6, lines 27 – 44),
- wherein said timing part (data set time  $\alpha$ ) measures an elapsed time ( $\alpha$ ) from the exposure period timing signal (V) right before a beginning of an exposure setup operation (exposure preparation time  $\beta$ ) to the beginning of the exposure setup operation ( $\beta$ ) by said exposure period setup part, and when a time from the beginning of the exposure setup operation ( $\beta$ ) calculated by the measured elapsed time to a generation of a next exposure period timing signal is equal or greater than a predetermined time ( $\beta$ ), said imaging apparatus control part (23, 31, and 37) shortens the time till the generation of the next exposure period timing signal from a regular exposure period (Col. 15, lines 12 – 51).

As to claim 2, Miyake teaches the imaging apparatus according to claim 1, wherein said predetermined time is a time required for conducting the exposure setup (exposure preparation time  $\beta$ ) to said image pickup device control part (Col. 8, lines 3 – 10).

As to claim 4 Miyake teaches the imaging apparatus according to claim 1, wherein in order to shorten the time till the generation of the exposure period timing, the exposure period timing signal is generated earlier than the regular exposure period, right after the exposure setup to said image pick up device control part, and the exposure period is thereby begun (Col. 15, lines 12 – 51):

As to claims 5, 6, and 8, these claims differ from claim 1, 2, and 4 only in that claims 1, 2, and 4 are apparatus claims whereas claim 5, 6, and 8 are method. Thus method claims 5, 6, and 8 are analyzed as previously discussed with respect to claims 1, 2, and 4 above.

As to claims 9, 10, 12, and 13, these claims differ from claim 1, 2, and 4 only in that claims 1, 2, and 4 are apparatus claims. Whereas claims 9, 10, 12, and 13 cite a limitation of a control program on a computer readable memory which provides the imaging apparatus the ability to provide the function of the claims 1, 2, and 4. Miyake teaches a control program stored in an internal ROM (Col. 6, lines 45 – 49).

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kinoshita (US Patent # 5,760,830) cites an image pick-up device having switching over means, image pick-up means, monitor means, recording means, still picture display means and control means.

Nakakuki (US Patent # 6,995,801) cites a method and apparatus for controlling an exposure period of a solid-state imaging apparatus based upon an image signal output.

Sasaki (US Patent # 6,243,136) cites an image input device and image input system which controls timing of successive imaging operations.

Kijima (US Patent # 6,812,965) cites an imaging apparatus with detectors for judging the operating condition of the apparatus.

Nakahira (US Patent # 7,187,409) cites a level difference correcting method and image pick-up device using the method.

### ***Inquiries***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher K. Peterson whose telephone number is 571-270-1704. The examiner can normally be reached on Monday - Friday 6:30 - 4:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CKP  
7 Sept 2007

A handwritten signature in black ink, appearing to read 'Ngoc-Yen Vu', with a long horizontal flourish extending to the right.

NGOC-YEN VU  
SUPERVISORY PATENT EXAMINER